

App. Serial No. 10/526,194
Docket No.: CH020032US

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Remarks

Claims 1-7, 9-10 and 12-17 are currently pending in the patent application. For the reasons and arguments set forth below, Applicant respectfully submits that the claimed invention is allowable over the cited references.

In the instant Office Action dated April 27, 2007, claims 1, 3-7, 9 and 14-15 stand rejected under 35 U.S.C. § 103(a) over Tamba (U.S. Patent No. 5,594,383); and claims 2, 10 and 12-13 stand rejected under 35 U.S.C. § 103(a) over Tamba in view of Petersen *et al.* (U.S. Patent No. 5,325,317).

The Office Action also indicated that claims 16-17 are allowed. Applicant acknowledges and appreciates this notification. Except for the change to the preamble of claim 5 (changed to depend only from claim 1), all of the pending claims including allowed claims 16-17 have been carefully reviewed and amended for the purpose of improving the language for presentation in a U.S. Letters Patent. None of these changes were intended to change the scope of the claims or overcome rejections concerning patentability. As examples, these changes include more careful delineation of the transition clause ("comprising" used only once in each claim), and more express antecedent recitation of "time constant" and "transfer function".

Applicant respectfully traverses each of the Section 103(a) rejections because the Office Action fails to cite to any reference that teaches or suggests the calibration of continuous-time filters as in the claimed invention. The Office Action does not cite to any reference that teaches calibrating continuous-time filters as claimed by Applicant: "the slave filter having a control signal input for receiving said control signal thus allowing to calibrate the slave filter's transfer function by influencing the slave filter's time constant" or, in amended form, "the slave filter that uses the control signal to influence the slave filter's time constant". In Applicant's specification, supporting example implementations are directed to varying a threshold voltage, varying the input voltage of an integrator or varying the frequency of a clock signal. None of the citations behind the Section 103(a) rejections provide teachings that would correspond to such claim limitations. Rather, in an attempt to support the rejections, the Office Action appears to be improperly using hindsight reconstruction --based upon teaching from Applicant's disclosure-- to assert correspondence to the claim limitations directed to

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calibrating continuous-time filters. The following discussion more particularly addresses each of the above mentioned issues in relation to specific claims.

Applicant respectfully traverses the Section 103(a) rejection of claims 1, 3-7, 9 and 14-15 because the cited portions of the Tamba reference fail to correspond to all of the claim limitations. Regarding claim 1, the cited portions of Tamba do not correspond to claim limitations directed to a voltage comparator that is connected to a variable threshold voltage. The Office Action acknowledges that Tamba's comparator 31 uses a fixed reference voltage (*i.e.*, ground), the Office Action then asserts that it would be an obvious "design expediency" to employ a variable reference voltage depending upon the application in which the circuit of Tamba is to be used. *See, e.g.*, page 3, lines 5-15 of the instant Office Action. While it is not entirely clearly what is meant by being a "design expedient" change (which has no basis in the MPEP), the Office Action appears to be asserting that such a change would be a matter of design choice for the Tamba circuit.

As amply supported by the law and by common sense, the skilled artisan would not find reason, under 35 U.S.C. 103(a), to change the Tamba circuit so that it uses a different reference voltage (*i.e.*, other than ground). According to long-standing law, basing a rejection on design choice is improper when the claimed structure and the function it performs are different from the prior art. *See In re Gal*, 980 F.2d 717 (Fed. Cir. 1992) (finding of "obvious design choice" precluded where the claimed structure and the function it performs are different from the prior art). In this instance, the rejection assumes that the Tamba reference would be modified to use a different reference voltage (*i.e.*, other than ground) for some unknown circuit application that involves different unknown circuit parameters that would permit the modified circuit to operate properly for this unknown circuit application. The Office Action has not provided any details of the unknown circuit application and/or the other necessary circuit changes for maintaining operability of the Tamba circuit.

Based on the record at this time, Applicant respectfully submits that the skilled artisan would not modify any relevant circuit parameters of the Tamba reference as might be suggested in the Office Action. First, Applicant's claimed structure and the function it performs are different from the asserted prior art. The asserted prior art, per the

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Examiner's modification to the Tamba circuit, would not provide any calibration function as claimed by Applicant. Thus, the finding of "obvious design choice" is precluded under the law (*see above In re Gal*).

Second, the skilled artisan would not modify any relevant circuit parameters of the Tamba reference because this asserted modification undermines the operation of the Tamba circuit. As indicated in MPEP § 2143.01, when the asserted modification would undermine both the operation and the purpose of the main reference, the §103 rejection is improper. *See also In re Gordon*, 733 F.2d 900, 221 U.S.P.Q. 1125 (Fed. Cir. 1984) (A §103 rejection cannot be maintained when the asserted modification undermines the operation and/or purpose of main reference.). The instant rejection proposes changing the Tamba circuit so that it uses a different reference voltage (*i.e.*, other than ground); however, this change would change the comparison performed by parallel-operating operational amplifiers (or comparators) 31 and 32 of Figure 10, and thereby adversely alter the output of the phase detect circuit 30 which, in turn, would result in an inability to synchronize to the input signal of the receiver. As indicated at column 11, the purpose of this embodiment (shown in Figures 9 and 10) is to precisely detect the phase difference for the feedback and overall operation of the receiver circuit. Therefore, this asserted modification is illogical and improper because it would change the Tamba circuit so that it fails to operate generally and fails to operate according to its intended purpose.

Third, under the recent USPTO guidelines (based on the recent U.S. Supreme Court decision as to teaching/suggestion/motivation under §103), for a rejection to be maintained under §103, the rejection must present some proper reason why a skilled artisan would change the main reference as proposed by the Examiner. In view of the above discussion, the record is unsupported by any proper reason why a skilled artisan would be motivated to abandon use of the fixed reference voltage, as taught by the Tamba reference, and instead select a different reference voltage for the Tamba reference.

Accordingly, under §103, the rejection is improper and should be withdrawn based on lack of motivation.

Notwithstanding the lack of motivation, the Examiner's proposed modification cannot stand because it would result in lack of correspondence to Applicant's claimed invention. According to the Office Action's proposed modification, the reference voltage

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would be set to another fixed value (based on the yet-to-be identified application and circuit parameters) and would therefore not correspond to a variable voltage as claimed by Applicant. This fixed reference voltage of the proposed modification would not correspond to the claim limitations that require the reference voltage be variable. To better appreciate the import thereof, Applicant's specification presents one example in which varying the reference voltage allows calibration of the time constant τ of a slave filter. *See, e.g.*, Paragraphs 0044-0047. As such, the Office Action fails to cite to prior art that corresponds to all of the claim limitations as is required by M.P.E.P. § 2143. Accordingly, the Section 103(a) rejection of claim 1, as well as claims 3-7, 9 and 14-15 that depend from claim 1, is improper and Applicant requests that it be withdrawn.

Moreover, to the extent that the Office Action would assert that having a variable reference voltage would be obvious, the Office Action appears to be improperly resorting to hindsight reconstruction based upon Applicant's disclosure in order to modify Tamba to have a variable reference voltage. *See, e.g.*, M.P.E.P. § 2142. The cited portions of the Tamba reference only teach using ground as the reference voltage and the Office Action has not cited to any reference that teaches the desirability of having a variable reference voltage. The Office Action also fails to cite to any reference that provides motivation for modifying Tamba to have a variable reference voltage. Applicant submits that without such a showing the rejection appears to be based upon improper hindsight reconstruction. Thus, Applicant requests that the rejection be withdrawn. Should any rejection based upon the Tamba reference be maintained, Applicant requests support for the Office Action's assertion that using a variable reference voltage would be obvious, support for modifying Tamba to use a variable reference voltage, and an opportunity to respond thereto.

Applicant further traverses the Section 103(a) rejection of claims 6 and 7 because the Office Action fails to cite to any portion of the Tamba reference as corresponding to numerous claim limitations. Regarding claim 6, the Office Action does not cite to any portion of Tamba as corresponding to claim limitations directed to the phase frequency comparator including a loop filter and a phase frequency detector situated in front of the loop filter. Regarding claim 7, the Office Action does not cite to any portion of Tamba as corresponding to claim limitations directed to the master control unit including a switch.

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Applicant submits that without such citations the Office Action has failed to show correspondence between the Tamba reference and the limitations of claims 6 and 7. Therefore, the Section 103(a) rejection of claims 6 and 7 is improper and Applicant requests that it be withdrawn.

Applicant respectfully traverses the Section 103(a) rejection of claims 2, 10 and 12-13 based upon the Tamba reference because the cited portions of Tamba do not correspond to all of the claim limitations as discussed above relating to the Section 103(a) rejection of claim 1. In at least this regard, the Section 103(a) rejection of claims 2, 10 and 12-13 is improper in that these claims depend from claim 1. Accordingly, Applicant requests that the Section 103(a) rejection of claims 2, 10 and 12-13 be withdrawn.

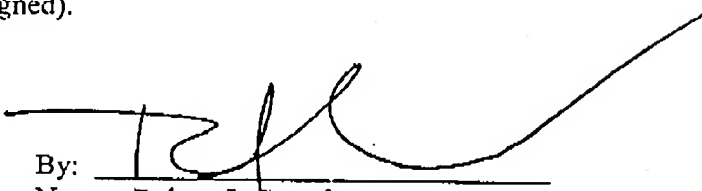
Applicant notes that minor amendments have been made to claims 1 and 5. These amendments have been made to reflect amendments that were made to claims 1 and 5 in the Amendment filed on 1/24/06, which were not reflected in the listing of claims in the Amendment filed on 2/28/07. Applicant has also amended claims 1, 6 and 12 to remove reference numerals. These amendments to claim 1, 5-6 and 12 are not being made to overcome any rejection raised by the instant Office Action, all of which fail for the reasons discussed above.

In view of the remarks above, Applicant believes that each of the rejections has been overcome and the application is in condition for allowance. Should there be any remaining issues that could be readily addressed over the telephone, the Examiner is asked to contact the agent overseeing the application file, Peter Zawilski, of NXP Corporation at (408) 474-9063 (or the undersigned).

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